CLAIMS

1.   A fuel theft detection system for detecting when fuel has been stolen from a vehicle's fuel tank, the detection system comprising:

        input means that is connectable to a vehicle's fuel level sensor for providing an indication of the fuel level in the vehicle's fuel tank;

        a controller connected to the input means;

        timing means for driving the controller to capture and record the fuel level at regular, pre-determined intervals;

        storage means for storing the recorded data; and

        wherein the controller is arranged to calculate the average fuel level over a first period of time, and to then store the resulting average fuel level in the storage means for later analysis, so that any deviation in the fuel level in successive periods of time by more than a predetermined amount would suggest fuel theft, with the controller, after the fuel tank has been filled with fuel, also being arranged to determine the amount of fuel that has been dispensed into the fuel tank and to then enable a comparison to be made between the amount of fuel actually dispensed into the fuel tank and the amount of fuel alleged to have been dispensed into the fuel tank, with any discrepancy between these two values also suggesting fuel theft.

2.   A fuel theft detection system according to claim 1, which further includes a reference value defining means for defining a plurality of

intermediate reference values between a truly full fuel tank and a truly empty fuel tank.

3. A fuel theft detection system according to either claim 1 or claim 2, wherein the storage means includes reference value profiles for all existing fuel level sensors and fuel tanks, with the relevant reference value profile being selected when the system is installed into the vehicle.

4. A fuel theft detection system according to any one of the preceding claims, wherein the input means produces an analogue signal indicative of the fuel level, with the system further including an analogue to digital converter for converting the analogue signal into a digital signal, the resulting digital signal defining a primary input for the system.

5. A fuel theft detection system according to any one of the preceding claims, wherein the timing means is an oscillator, with the regular, pre-determined interval being approximately 10 seconds.

6. A fuel theft detection system according to any one of the preceding claims, wherein the system is connected in series between a vehicle's ignition switch and the vehicle's fuel level sensor in the fuel tank.

7. A fuel theft detection system according to any one of the preceding claims, wherein the storage means is fitted with a transmitter for transmitting the stored, recorded data to a remote receiver.

8. A fuel theft detection method for detecting when fuel has been stolen from a vehicle's fuel tank, the method comprising the steps of:

sensing the fuel level in the vehicle's fuel tank;

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capturing and recording the fuel level at regular, pre-determined intervals;

storing the recorded data;

calculating the average fuel level over a first period of time;

storing the resulting average fuel level for later analysis, so that any deviation in the fuel level in successive periods of time by more than a predetermined amount would suggest fuel theft; and

after the fuel tank has been filled with fuel, determining the amount of fuel that has been dispensed into the fuel tank, so that a comparison can be made between the amount of fuel actually dispensed into the fuel tank and the amount of fuel alleged to have been dispensed into the fuel tank, with any discrepancy between these two values also suggesting fuel theft.

9. A fuel theft detection method according to claim 8, which includes the step of defining a plurality of intermediate reference values between a truly full fuel tank and a truly empty fuel tank.

10. A fuel theft detection method according to either claim 8 or claim 9, which further includes the steps of:

providing reference value profiles for all existing fuel level sensors and fuel tanks; and

selecting the relevant reference value profile.

11. A fuel theft detection method according to any one of the preceding claims 8 to 10, which includes the step of transmitting the stored, recorded data to a remote receiver.